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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,806	07/21/2006	Olivier J.M. Hus	GB04 0025 US1	9055

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EXAMINER

SARWAR, BABAR

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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10/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,806	Applicant(s) HUS ET AL.	
	Examiner BABAR SARWAR	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on **08/13/2009** has been entered.

Response to Arguments

2. Applicant's arguments with respect to **claims 1-20** have been considered but are moot in view of the new ground(s) of rejection.
3. **Claims 1, 15, and 19** have been amended.
4. **Claims 1-20** are currently pending.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 15, and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended **Claims 1, 15, and 19** recite the terms "**with respect to at least a transmission rate**" which are not recited or stated anywhere in the submitted specification. Thus the claim contains new matter. However, the specification does disclose a packet data multicast communication system comprising the stations being able to determine into which predetermined quality ranges a measured signal reception quality falls as disclosed in **Fig. 3**.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 15, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 15, and 19 recite the term "**non-contiguous**" which is not defined anywhere in the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2002/0003798A1) in view of Hwang et al. (US 2002/0168945 A1), hereinafter referenced as Sato and Hwang.

Consider **claims 1, 15, and 19**, Sato discloses a method of operating a packet data multicast communication system comprising a first station (**Fig. 4, where Sato discloses a wireless base station/information delivery apparatus**) and a plurality of second stations (**Fig. 4, where Sato discloses a plurality of wireless terminals A-D, H-L**), the first and second stations having transceiving equipment (**Figs. 2, 3 elements 21, and 11, where Sato discloses transceivers**) for communication between the first and second stations (**Abstract, where Sato discloses multicast services from base station to wireless terminals, therefore communication between the first and second stations**). Sato further discloses that the method comprises the first station transmitting a data packet and at least one of the plurality of the second stations receiving the data packet (**Para 0014, where Sato discloses communication between base station and wireless terminals**), characterized by the at least one of the plurality of the second stations measuring the quality of reception of the received data packet (**Para 0026, where Sato discloses wireless terminals measuring reception quality of the received data**), and determining into which one of at least three predetermined quality ranges the measured quality falls wherein the first station adopts a respective subsequent transmitter behavior in response to each of the at least three predetermined quality ranges (**Para 0102-0103, Figs. 10, and 15, where Sato discloses transmission rates T1-T5 , therefore predetermined quality ranges**). Sato does not explicitly disclose that the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is identical with respect to at least a transmission rate. Hwang discloses that the subsequent transmitter behavior

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corresponding to at least two non-contiguous ones of the quality ranges is identical with respect to at least a transmission **rate (Para 0068, Figs. 3, 4, where Hwang discloses an ACK signal, A NAK only signals, and A NAK signals with additional control information, therefore at least two non-contiguous ones of the quality ranges is identical with respect to at least a transmission rate).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sato with the teachings of Hwang for the purpose of improving the transmission efficiency of packet data as discussed in **Para 0038**.

Consider **claim 2**, the combination teaches everything claimed as implemented above (see claim 1). In addition, Sato discloses that the method characterized by the second station transmitting indicia representative of the quality ranges other than said at least two non-contiguous quality ranges **(Para 0102, where Sato discloses modulation schemes corresponding to reception quality reported from the wireless terminals, therefore indicia representative of the quality ranges from the mobile terminals).**

Consider **claim 3**, the combination teaches everything claimed as implemented above (see claim 2). In addition, Sato discloses that the method characterized by the second station transmitting the indicia representative of the quality ranges in respect of each of the at least two non-contiguous quality ranges **(Para 0072, where Sato discloses modulation schemes corresponding to reception quality reported from the wireless terminals, therefore indicia representative of the quality ranges from the mobile terminals).**

Consider **claim 4**, the combination teaches everything claimed as implemented above (see claim 1). In addition, Sato discloses that the method characterized in that the at least two non-contiguous quality ranges are the best and the worst quality ranges **(Figs. 10, 15, where Sato discloses different Transmission rates T1-T5, therefore best and worst quality ranges)**.

Consider **claim 5**, the combination teaches everything claimed as implemented above (see claim 1). In addition, Sato discloses that the method wherein the measuring of the quality of reception of the received data packet is characterized by comparison of a measure of a predetermined quality metric of a received signal with at least three quality ranges **(Figs. 10, 15, where Sato discloses different modulation schemes and transmission rates)**.

Consider **claim 6**, the combination teaches everything claimed as implemented above (see claim 5). In addition, Sato discloses that the method characterized in that the quality ranges are defined by threshold values applied by respective second stations **(Para 0073, where Sato discloses reception quality's predetermined level, therefore threshold)**.

Consider **claim 7**, the combination teaches everything claimed as implemented above (see claim 5). In addition, Sato discloses that the method characterized in that the quality ranges are defined by threshold values signaled to the second stations by the first station **(Para 0073, where Sato discloses reception quality's predetermined level for the wireless terminals)**.

Consider **claim 8**, the combination teaches everything claimed as implemented

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above (see claim 5). In addition, Sato discloses that the method characterized in that the predetermined quality metric comprises at least one of: E_b/N_0 (energy per bit/noise density); the number of data packets received successfully in a predetermined time window; the proportion of data packets previously received correctly out of a group of predetermined number of packets; and the received SIR (Signal to Interference Ratio) or SNR (Signal to Noise Ratio) of another received signal (**Para 0059, where Sato discloses that the reception quality includes a reception level, an interference level, a noise level, and an error rate**).

Consider **claim 9**, the combination teaches everything claimed as implemented above (see claim 8). In addition, Sato discloses that the method characterized in that the quality of reception of the received data packet is determined during a predetermined duration (**Para 0068, where Sato discloses a predetermined time period for a wireless station to receive multicast information, therefore measuring reception quality during a predetermined duration**).

Consider **claim 10**, the combination teaches everything claimed as implemented above (see claim 1). In addition, Sato discloses that the method characterized in that the first station adjusts one or more transmission parameters to ensure that at least a predetermined percentage of secondary stations receive a data packet data service satisfactorily (**Para 0077, where Sato discloses choosing spreading codes based on reception quality reported from the wireless terminals, therefore adjusting one or more transmission parameters**).

Consider **claim 11**, the combination teaches everything claimed as implemented

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above (see claim 10). In addition, Sato discloses that the method characterized in that the transmission parameters comprise one or more of: number of retransmissions; transmit power; spreading factor; code rate; and modulation scheme (**Para 0077, where Sato discloses transmission rates and spreading codes**).

Consider **claim 12**, the combination teaches everything claimed as implemented above (see claim 2). In addition, Sato discloses that the method characterized in that different of the indicia are distinguished by transmission at different times (**Para 0102, where Sato discloses mobile terminals reporting reception quality and the base station transmitting multicast data at different transmission rates, therefore indicia are distinguished by transmission at different times**).

Consider **claim 13**, the combination teaches everything claimed as implemented above (see claim 2). In addition, Sato discloses that the method characterized in that different of the indicia are distinguished by different code words (**Para 0077, where Sato discloses mobile terminals reporting reception quality and the base station transmitting multicast data at different transmission rates, indicia are distinguished by different code words**).

Consider **claim 14**, the combination teaches everything claimed as implemented above (see claim 2). In addition, Sato discloses that the method characterized in that different of the indicia are distinguished by different frequency channels (**Para 0077, where Sato discloses mobile terminals reporting reception quality and the base station transmitting multicast data at different transmission rates, therefore**

indicia are distinguished by different frequency channels).

Claim 16, as analyzed with respect to the limitations as discussed in claim 5.

Claim 17, as analyzed with respect to the limitations as discussed in claim 10.

Claim 18, as analyzed with respect to the limitations as discussed in claim 11.

Claim 20, as analyzed with respect to the limitations as discussed in claim 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:00 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

/BABAR SARWAR/
Examiner, Art Unit 2617

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617